REMARKS

Applicant submits a new set of claims 88-111 to replace the claims currently on file. The new claims are directed to an electroluminescent device having a light-emissive layer comprising a first component for accepting positive charge carriers, a second component for accepting negative charge carriers, and a third organic light-emissive component for generating light as a result of a combination of charge carriers from the first and second components, wherein the first, second and third components are combined in a single molecule. Support for the subject matter of new claim 88 including the additional feature of the first, second and third components being combined into a single molecule, may be found at, for example, the bridging paragraph between pages 6 and 7 of the specification and from originally filed claim 9. Support for the subject matter for new claims 89-91 can be found from originally filed claims 10 to 12. Support for the subject matter of new claims 92-111 can be found from originally filed claims 16 to 34.

In regard to novelty and nonobviousness, none of the cited prior art documents disclose or suggest a single molecule combining the three components as defined in new claim 88.

In the claimed devices a type II semiconductor interface is formed between at least one of the first, second and third components and another of the first, second and third components, where the first, second and third components are combined in a single molecule. The device structure can therefore be simplified in that the required number of layers and polymer components in the light emitting device can be reduced in comparison with prior art arrangements. Instead of requiring a separate material to act as a component for accepting positive charge carriers, a separate material to act as a

component for accepting negative charge carriers, and a separate material to act as a light-emissive component for generating light, in the present electroluminescent device, a single molecule can provide all of these components.

In contrast to the prior art electroluminescent devices where each differently functioning component forms a separate layer in the device, the claimed device reduces the number of required layers. This can be advantageous since one disadvantage commonly associated with multiple layered devices is that where the layers are deposited from solution it is difficult to avoid one layer being disrupted when the next layer is deposited, and problems can arise with voids or material trapped between the increased number of interlayer boundaries.

In contrast to the prior art electroluminescent devices where different functioning components are blended in a single layer, the claimed device reduces the number of components needed in the blend.

In the present office action, the Examiner has relied upon Garten *et al.* (Advanced Materials, Vol. 9, No. 2, pp. 127-131) and Friend *et al.* (U.S. Patent No. 6,429,601). Garten *et al.* discloses a single layer device comprising a blend of three separate molecular species: PVK; SiPPV; and PBD. Garten *et al.* also discloses a double layer device, one layer comprising a blend of PVK and SiPPV and the other layer comprising PBD. There is absolutely no disclosure or suggestion in Garten *et al.* of providing the three components specified in present claim 88 in a single molecule. The Examiner has pointed to the right hand column of page 128 and the last paragraph of the left hand column on page 129 in stating that Garten *et al.* discloses first, second and third components in a single molecule. However, there is no

disclosure of such a molecule. The right hand column on page 128 refers to the spectrum (shown in Figure 2) of SiPPV in PVK as being identical to that of the solution of the copolymer. The "SiPPV in PVK" is a blend (mixture) of the two separate molecular species. Further, the "copolymer" referred to in solution is SiPPV (poly(dimethylsilylene-p-phenylene-vinylene-(2,5-dibutoxy-p-pheylene)-vinylene-p-phenylene). SiPPV is a luminescent material (see left hand column on page 128). The last paragraph in the left hand column on page 129 refers to several different blends and both single and double layer devices. However, nowhere is there any disclosure or suggestion of a single molecule comprising the three components specified in present claim 88.

On the basis of the above, Applicant submits that the subject matter of new claim 88 is novel and nonobvious over the disclosure of Garten *et al.*

Friend et al. discloses a number of different possible light-emitting materials in the first paragraph of column 5. These include PPV, MEH-PPV, a PPV-derivative, a polyfluorene and/or a co-polymer incorporating polyfluorene segments, PPVs and/or related copolymers. However, nowhere is there any disclosure or suggestion of a single molecule comprising the three components specified in present claim 88. Therefore, Applicant submits that the subject matter of new claim 88 also is not rendered obvious by Garten *et al.* taken with Friend *et al.*

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

In view of the new set of claims submitted herewith, Applicant has not expressly addressed every separate statement made by the Examiner regarding the prior art with respect to the prior claims. However, Applicant reserves the right to file a continuation application and prosecute the original or similarly amended claims.

Applicant's IDSs

Applicant filed four IDSs prior to the March 31, 2004 mailing date of the present Office Action. The first three IDSs were initialed by the Examiner and attached to the first Office Action. However, the fourth IDS, filed January 12, 2004, was not attached to the first Office Action. Applicant submits a copy herewith, including a stamped postcard showing receipt by the Patent Office on January 12, 2004. Applicant thus respectfully requests entry of this fourth IDS.

Applicant also filed a fifth IDS on July 19, 2004. A copy of this fifth IDS with the stamped postcard is also enclosed. Applicant respectfully requests review and entry of this fifth IDS.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: Aug 31, 2004

By: _____
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